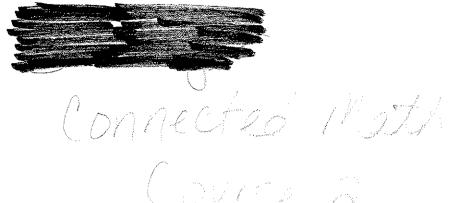
Title of Instructional Materials: Connected Mathematics

Grade Level: Grade 7

Summary of Connected Mathematics

Overall Rating:	⊠ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	Important Mathematical Ideas:	Weak (1-2)Moderate (2-3)Strong (3-4)
the Common Core standards. It's proportions. They claim to have a	ll-developed and doesn't meet all very weak in ratios, percent, and a Common Core toolkit, but it was nittee. The standards that are met deep understanding. There are tenough practice for students to	Summary / Justification / Evide	nce:
Skills and Procedures:	⊠ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	Mathematical Relationships:	Weak (1-2)Moderate (2-3)Strong (3-4)
Summary / Justification / Evide	ence:	Summary / Justification / Evide	nce:



Instructional Materials Analysis and Selection

Phase 3: Assessing Content Alignment to the Common Core State Standards for Mathematics

Albert Confusion Confusion

a project of
The Charles A. Dana Center
at the University of Texas at Austin

Instructional Materials Analysis and Selection

Phase 3:

Assessing Content Alignment to the Common Core State Standards for Mathematics

A project of

The Indiana Education Roundtable, The Indiana Department of Education, and

The Charles A. Dana Center at The University of Texas at Austin

2010-2011

Instructional Materials Analysis and Selection Assessing Content Alignment to the Common Core State Standards for Mathematics

This tool provides educators with a structured way to make informed decisions when selecting mathematics instructional materials. In particular, it can help you become more knowledgeable about the Common Core State Standards for Mathematics so you can select instructional materials aligned with these standards.

This resource can also be used with the Dana Center's larger 4-phase Instructional Materials Analysis and Selection toolset: Phase 1: Studying the Standards, Phase 2: Narrowing the Field of Instructional Materials, Phase 3: Assessing Subject-Area Content Alignment, and Phase 4: Assessing Vertical Alignment of Instructional Materials. The particular resource you hold is a phase 3 tool that has been customized for assessing the alignment of instructional materials with the Common Core State Standards for Mathematics. Note that in 2009, the Dana Center developed a similar tool for Indiana educators to use in analyzing the alignment of instructional materials to Indiana's Academic Standards for Mathematics.

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About the development of this resource

This tool, Instructional Materials Analysis and Selection: Assessing Content Alignment to the Common Core State Standards for Mathematics, draws on the Dana Center's nearly 20 years of experience in strengthening education and has been used extensively in Texas and, increasingly, other states, to help local school districts and schools select instructional materials aligned with their standards. Development and production of the Instructional Materials Analysis toolset was supported by the Charles A. Dana Center.

This resource consists of a set of 15 individual grade-level / course documents that span kindergarten through the third year of high school mathematics. There is a document for each grade from kindergarten through 8, and six documents for high school mathematics (one each for the three courses in the traditional high school pathway Algebra I, Geometry, Algebra II; and one each for the three courses in the integrated high school pathway Mathematics I, Mathematics II, and Mathematics III). At the request of various states and other entities, the Dana Center has populated this *Instructional Materials Analysis and Selection* tool with standards from the *Common Core State Standards for Mathematics* for use by local districts in selecting instructional materials aligned with these standards.

Note that the copyright of the Common Core State Standards for Mathematics is held by the National Governors Association Center for Best Practices and the Council of Chief State School Officers (collectively, NGA Center/CCSSO). This use of the CCSS for Mathematics is done under the CCSS Terms of Use, available at www.corestandards.org/terms-of-use. Specifically, this work is done under the Terms of Use "non-exclusive, royalty-free license to copy, publish, distribute, and display the Common Core State Standards for non-commercial purposes that support the Common Core State Standards Initiative." For a complete copy of the Common Core State Standards for Mathematics as well as the CCSS for Mathematics, Appendix A: Designing high school mathematics courses based on the Common Core State Standards, go to www.corestandards.org/the-standards.

October 2010 release.

We welcome your comments and suggestions for improvements—please send to dana-txshop@utlists.utexas.edu or the address in the copyright section above.

About the Charles A. Dana Center at The University of Texas at Austin

The Dana Center works to raise student achievement in K-16 mathematics and science, especially for historically underserved populations. We do so by providing direct service to school districts and institutions of higher education; to local, state, and national education leaders; and to agencies, nonprofits, and professional organizations concerned with strengthening American education.

The Center was founded in 1991 at The University of Texas at Austin. We carry out our work by supporting high standards and building system capacity; collaborating with key state and national organizations to address emerging issues; creating and delivering professional supports for educators and education leaders; and writing and publishing education resources, including student supports. Our staff of more than 60 has worked with dozens of school systems in nearly 20 states and with 90 percent of Texas's more than 1,000 school districts. We are committed to ensuring that the accident of where a child attends school does not limit the academic opportunities he or she can pursue.

For more information about our programs and resources, see our homepage at www.utdanacenter.org. To access our resources (many of them free), see our products index at www.utdanacenter.org/products. And to learn more about our professional development—and sign up online—go to www.utdanacenter.org/pd.

^{*} For the high school course sequences, we relied on the Common Core State Standards Mathematics Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards, developed for the CCSS initiative by Achieve, Inc., which convened and managed the Achieve Pathways Group.

Acknowledgments

Unless otherwise noted, all staff listed here are affiliated with the Dana Center.

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Our thanks

We gratefully acknowledge the more than 100 school districts and thousands of educators who have informed the development of these resources.

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and print production manager
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Introduction

Phase 1: Studying the Standards

Phase 2: Narrowing the Field of Instructional Materials

Phase 3: Assessing Mathematical Content Alignment

The purpose of Phase 3: Assessing Mathematical Content Alignment is to determine the degree to which the materials are aligned to the standards (content and processes). In Phase 3, participants conduct an in-depth review of the 2-3 instructional materials selected in Phase 2. The Phase 3 process requires selection committee members to use set criteria in order to determine a rating for each sample, to cite examples to justify their score for each sample, and to document standards that are missing or not well-developed in the instructional materials examined.

Implementation

As a whole group, selection committee members should practice applying the Phase 3 rubric. The purpose of the whole group practice is to promote inter-rater reliability and calibration.

In Phase 3 it is not important to analyze every page, section, or chapter of a resource. It is important to identify an area, topic, or big idea for the deep content analysis of Phase 3 (e.g. development of equivalent fractions, addition of whole numbers, development of proportionality...). The identified area, topic, or big idea will be used for all the instructional materials considered in Phase 3. The area, topic, or big idea can be identified through the use of student achievement data, curriculum priorities/challenges, or ideas that typically make up a greater portion of instruction in particular grade levels/courses. In most cases, Phase 3 will identify the one resource that is best aligned.

Step-by-Step Instructions

- 1. Use your current adoption to practice using the Phase 3 rubric. Select one big idea to focus your analysis (see note above for selecting the area, topic, or big idea).
- 2. Independently, committee members use their current resource, the identified big idea (and associated pages in that resource), and the Phase 3 rubric to score and document the extent to which the material (content and processes) aligns to the standards.
- 3. In small groups, committee members share their scoring and justifications. Small groups come to consensus on how the current resource would score on this big idea.
- 4. Each small group shares with the large group their score. Repeat the consensus building to generate a large group score on this big idea.
- 5. Clarify any misunderstandings about how to apply the rubric before committee members begin to use Phase 3 rubric on the selected materials.

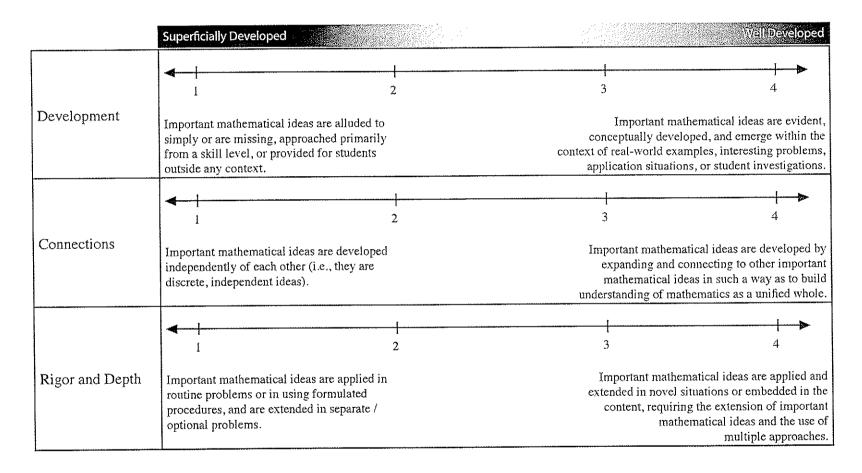
- 6. Based on the size of the selection committee, determine the number of areas, topics, or big ideas to be examined for each grade/course. If the group size is large, more areas, topics, big ideas can be examined within each grade level/course.
- 7. Make sure committee members have multiple copies of the Phase 3 rubric.
- 8. Committee members apply the Phase 3 rubric for each of the materials.
- 9. Establish a time line for groups to complete and submit Phase 3 documentation.
- 10. Establish a data collection and analysis process to attain a rating for each resource.

Materials and Supplies

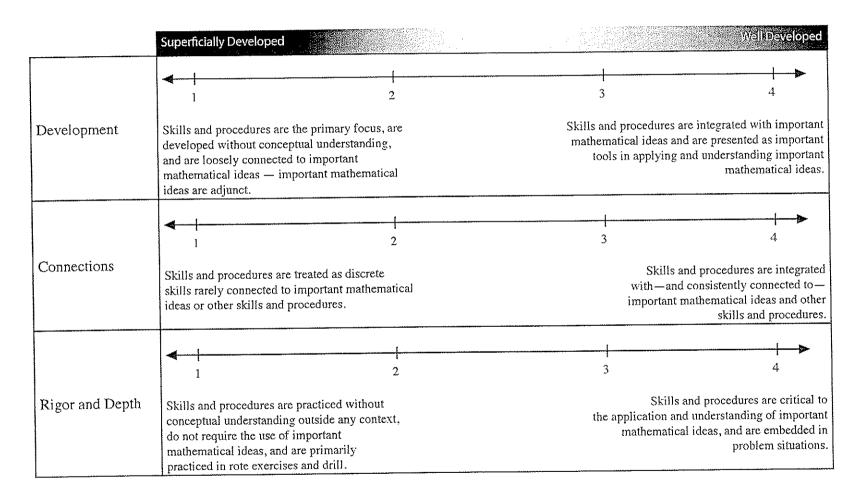
- Phase 3: Assessing Mathematical Content Alignment black line master multiple copies per person
- Currently used instructional resource
- The 2 to 4 instructional materials selected in Phase 2

Phase 4: Assessing Vertical Alignment of Instructional Materials

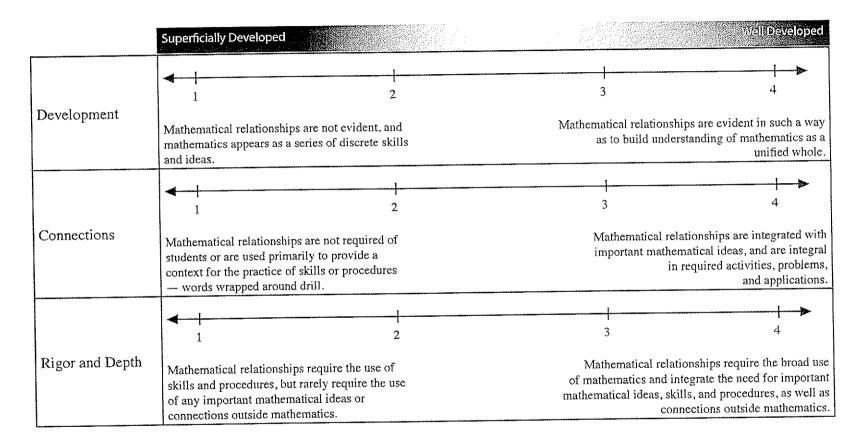
Important Mathematical Ideas: Understanding the scoring



Skills and Procedures: Understanding the scoring



Mathematical Relationships: Understanding the scoring



Reviewed By:	
Title of Instructional Materials:	

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



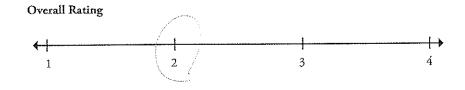
Reviewed By:	
Title of Instructional Materials:	

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



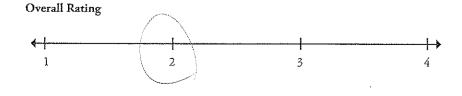
Reviewed By:	
Title of Instructional Materials:	

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



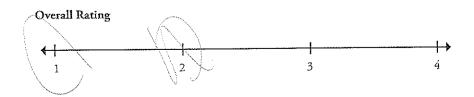
Reviewed By:	
Title of Instructional Materials:	

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as 2 + 7. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	A	
Title of Instructional Materials:		

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1,2) with slope 3, middle school students might abstract the equation (y-2)/(x-1) = 3. Noticing the regularity in the way terms cancel when expanding (x-1)(x+1), $(x-1)(x^2+x+1)$, and $(x-1)(x^3+x^2+x+1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	 	
Title of Instructional Materials:		

Analyze proportional relationships and use them to solve real-world and mathematical problems.	Summary and documents met. Cite examples from		e domain, clu	ster, and stan	dard are
7.RP.1			_	_	_
Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.	Important Mathematical Idea	as (2	3	4
114	Skills and Procedures	4 1			
		1	2	3	4
	Mathematical Relationships		I	1	
		1	2	3	4
	Summary / Justification /	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.			, at the later was		
Jav. 1: Gaph	Portions of the domain, of developed in the instruct			e missing or n	ot well
	Overall Rating	 	2	3	

The Charles A. Dana Center

14

Reviewed By:	
Title of Instructional Materials:	

Summary and documentation of how the domain, cluster, and standard are Analyze proportional relationships and use them to solve real-world and met. Cite examples from the materials. mathematical problems. 7.RP.2a Important Mathematical Ideas 2. Recognize and represent proportional relationships between quantities. a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the Skills and Procedures oriain. Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Analyze proportional relationships and use them to solve real-world and Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials. mathematical problems. 7.RP.2b Important Mathematical Ideas 2. Recognize and represent proportional relationships between quantities. b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. Skills and Procedures Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. C+S: Inv. 3+4
MSA Inv. 1-4 Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:

Title of Instructional Materials:

MATHEMATICS: GRADE 7 - RATIOS AND PROPORTIONAL RELATIONSHIPS - 7.RP

Summary and documentation of how the domain, cluster, and standard are Analyze proportional relationships and use them to solve real-world and met. Cite examples from the materials. mathematical problems. 7.RP.2c Important Mathematical Ideas 2. Recognize and represent proportional relationships between quantities. c. Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the Skills and Procedures number of items can be expressed as t = pn. Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. Portions of the domain, cluster, and standard that are missing or not well + SI DN + +5 developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Analyze proportional relationships and use them to solve real-world and Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials. mathematical problems. 7.RP.2d Important Mathematical Ideas 2. Recognize and represent proportional relationships between quantities. d. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate. Skills and Procedures Mathematical Relationships 3 Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. V+P: INV 8 C+S: INV 3 MSA INV 1-4 Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Analyze proportional relationships and use them to solve real-world and Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials. mathematical problems. 7.RP.3 Important Mathematical Ideas Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error. Skills and Procedures Mathematical Relationships 2 3 Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating

3

2

Reviewed By:	
Title of Instructional Materials:	

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Summary and documentation met. Cite examples from the			luster, and standa	ard are
7.NS.1a1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	Important Mathematical Ideas	1	2	3	
 Describe situations in which opposite quantities combine to make For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged. 	Skills and Procedures	1	2.	3	 →
	Mathematical Relationships	1	2	3/	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E				
	Portions of the domain, clu developed in the instruction			are missing or no	t well
	Overall Rating	1	2	3	 → 4

The Charles A. Dana Center

Reviewed By:	
Title of Instructional Materials:	

Summary and documentation of how the domain, cluster, and standard are Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. met. Cite examples from the materials. 7.NS.1b Important Mathematical Ideas 1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. b. Understand p + q as the number located a distance |q| from p, in the Skills and Procedures positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. Mathematical Relationships Summary / Justification / Evidence in und Indicate the chapter(s), section(s), and/or page(s) reviewed. A the N. 1, 2 Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating 2

Reviewed By:	
Title of Instructional Materials:	

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
7.NS.1c1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	Important Mathematical Ideas 1 2 3 4
c. Understand subtraction of rational numbers as adding the additive inverse, $p-q=p+(-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	
Athen: 2	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Reviewed By:	
Title of Instructional Materials:	

Summary and documentation of how the domain, cluster, and standard are Apply and extend previous understandings of operations with fractions met. Cite examples from the materials. to add, subtract, multiply, and divide rational numbers. 7.NS.1d Important Mathematical Ideas 1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. d. Apply properties of operations as strategies to add and subtract Skills and Procedures rational numbers. Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. Athen: at Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Summary and documentation of how the domain, cluster, and standard are Apply and extend previous understandings of operations with fractions met. Cite examples from the materials. to add, subtract, multiply, and divide rational numbers. 7.NS.2a Important Mathematical Ideas 2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the Skills and Procedures properties of operations, particularly the distributive property, leading to products such as (-1)(-1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing realworld contexts. Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. A the N: 3, 4 Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Summary and documentation of how the domain, cluster, and standard are Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. met. Cite examples from the materials. 7.NS.2b Important Mathematical Ideas 2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) Skills and Procedures is a rational number. If p and q are integers, then -(p/q) = (-p)/q = p/(-q). Interpret quotients of rational numbers by describing real-world contexts. Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. A the N: 3 Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Summary and documentation met. Cite examples from the	on of how to materials.	he domain, c	luster, and standard are		
7.NS.2c2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	Important Mathematical Ideas	1	2	3 4		
 Apply properties of operations as strategies to multiply and divide rational numbers. 	Skills and Procedures	4 	2	3 4		
	Mathematical Relationships	1.	2	3 4		
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence					
A the N: 3,4	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):					
	Overall Rating	(- 2	1 1 1		

Reviewed By:	
Title of Instructional Materials:	

Summary and documentation of how the domain, cluster, and standard are Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. met. Cite examples from the materials. 7.NS.2d Important Mathematical Ideas 2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or Skills and Procedures eventually repeats. Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. Portions of the domain, cluster, and standard that are missing or not well C+S:3 A +he N:3 developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	Summary and documentation met. Cite examples from the	on of how the materials.	ne domain, clu	ster, and standa	rd are
7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers. ¹	Important Mathematical Ideas	1	2	1 3	4
	Skills and Procedures	(2	3	
	Mathematical Relationships	1	2	13	4
1 Computations with rational numbers extend the rules for manipulating fractions to complex fractions. Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E	Evidence			
A the N: 2, 3, 4	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):				
	Overall Rating	1	2	1 3	4

Reviewed By:	
Title of Instructional Materials:	

Use properties of operations to generate equivalent expressions.	Summary and documentati met. Cite examples from th	on of how the e materials.	domain, clus	ter, and stand	ard are
7.EE.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	Important Mathematical Ideas		2	3	4
	Skills and Procedures	1)	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / l	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
MSA	Portions of the domain, cl developed in the instructi	luster, and sta onal materials	ndard that ard (if any):	e missing or n	ot well
	Overall Rating	1	2		 → 4

Reviewed By:	
Title of Instructional Materials:	

Use properties of operations to generate equivalent expressions.	Summary and documentation of how the domain, cluster, and standard armet. Cite examples from the materials.
7.EE.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.	Important Mathematical Ideas 1 2 3 4
For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."	Skills and Procedures 1 2 3
	Mathematical Relationships 1 2 3
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	
Trans. Kit a	Portions of the domain, cluster, and standard that are missing or not wel developed in the instructional materials (if any):
	Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Summary and documentation of how the domain, cluster, and standard are Solve real-life and mathematical problems using numerical and algebraic expressions and equations. met. Cite examples from the materials. 7.EE.3 Important Mathematical Ideas Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions. and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and Skills and Procedures estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on Mathematical Relationships the exact computation. 2 3 Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials	

Summary and documentation of how the domain, cluster, and standard are Solve real-life and mathematical problems using numerical and met. Cite examples from the materials. algebraic expressions and equations. 7.EE.4a Important Mathematical Ideas 4. Use variables to represent quantities in a real-world or mathematical 3 problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. a. Solve word problems leading to equations of the form px + q = r and Skills and Procedures p(x + q) = r, where p, q, and r are specific rational numbers. Solve 3 equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width? Mathematical Relationships 2 Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating 2

Reviewed By:	
Title of Instructional Materials:	

Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

algebraic expressions and equations. 7.EE.4b

- 4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
 - b. Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

MSA. a

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

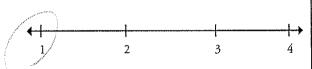
Important Mathematical Ideas



Skills and Procedures



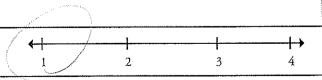
Mathematical Relationships



Summary / Justification / Evidence

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):

Overall Rating



Reviewed By:	
Title of Instructional Materials:	

Draw, construct, and describe geometrical figures and describe the relationships between them.	Summary and documentation of how the domain, cluster, and standard a met. Cite examples from the materials.	re
7.G.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Important Mathematical Ideas 1 2 3	 → 4
	Skills and Procedures 1 2 3	4
	Mathematical Relationships 1 2 3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or not we developed in the instructional materials (if any):	
C+ >: 4	Overall Rating 1 2 3	 → 4

Reviewed By:	
Title of Instructional Materials:	

Draw, construct, and describe geometrical figures and describe the relationships between them.	Summary and documentati met. Cite examples from the	on of how the e materials.	domain, ciusi	er, and stand	aru are
7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric	Important Mathematical Ideas		2	3	
shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Skills and Procedures		2	3	4
	Mathematical Relationships		2	3	 -
	Summary / Justification / E	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
F+W: 1-4	Portions of the domain, cl developed in the instruction	uster, and sta onal materials	ndard that are s (if any):	missing or n	ot well
	Overall Rating		1 2	1 3	

I	Reviewed By:	
-	Title of Instructional Materials:	

Draw, construct, and describe geometrical figures and describe the relationships between them.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
7.G.3	Important Mathematical Ideas
Describe the two-dimensional figures that result from slicing three- dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	1 2 3 4
	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	
Trans Kit	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

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Title of Instructional Materials:	

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
Important Mathematical Ideas
1 2 3 4
Skills and Procedures 2 3 4
Mathematical Relationships 1 2 3 4
Summary / Justification / Evidence
Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
Overall Rating 1 2 3 4

Reviewed By:	
Title of Instructional Materials:	

Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.				
7.G.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	Important Mathematical Ideas 1 2 3 4				
	Skills and Procedures 2 3 4				
	Mathematical Relationships 1 2 3 4				
	Summary / Justification / Evidence				
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
575:3	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):				
	Overall Rating 1 2 3 4				

Reviewed By:	
Title of Instructional Materials:	

Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
7.G.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Important Mathematical Ideas 1 2 3 4
	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	FOUND 2
S+5:3,3 F+W:1-5	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
ı	
	Overall Rating 1 2 3 4

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Reviewed By:	
Title of Instructional Materials:	

Use random sampling to draw inferences about a population.	Summary and documentation met. Cite examples from the	on of how the ematerials.	domain, clust	er, and stand	ard are
7.SP.1 Understand that statistics can be used to gain information about a	Important Mathematical Ideas		2	3	4
population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.	Skills and Procedures	4	2	3	4
	Mathematical Relationships		2	3	4
	Summary / Justification / E	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.			,		
Trans Kit	Portions of the domain, cludeveloped in the instruction	uster, and star onal materials	ndard that are (if any):	missing or n	ot well
	Overall Rating	(+)		3	→ → 4

Reviewed By:	
Title of Instructional Materials:	

Use random sampling to draw inferences about a population.	Summary and documentation met. Cite examples from the	on of how the dol materials.	main, cluste	er, and Standa	iu aie
7.SP.2	Important Mathematical Ideas	(1)	-		 ->
Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.	Skills and Procedures		2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / E	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
trans Lit	Portions of the domain, cl developed in the instruction	uster, and standa onal materials (if	ard that are any):	missing or no	ot well
	Overall Rating	11			
			2	3	4

Reviewed By:	
Title of Instructional Materials:	

Draw informal comparative inferences about two populations.	Summary and documentation met. Cite examples from the	on of how the domain, cluster, and stand s	andard are
7.SP.3 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.	Important Mathematical Ideas	1 2 3	4
	Skills and Procedures	1 2 3	}
	Mathematical Relationships	1 2 3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cludeveloped in the instruction	uster, and standard that are missing	or not well
	Overall Rating	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4

Reviewed By:	
Title of Instructional Materials:	

Draw informal comparative inferences about two populations.	Summary and documentation met. Cite examples from the	on of how to materials	he domain, cluster	, and Standa	iu aic
7.SP.4 Use measures of center and measures of variability for numerical data Use measures of center and measures of variability for numerical data	Important Mathematical Ideas	1	1 2	3	4
The measures of center and measures of transactive inferences about two from random samples to draw informal comparative inferences about two copulations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.	Skills and Procedures	← 1	1 2	3	 → 4
	Mathematical Relationships	1	1 2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E		Lud that are n	olecina or ne	ot well
DD: 3,4	Portions of the domain, cl developed in the instruction	uster, and onal mater	standard that are in	naamig or me	
	Overall Rating		1 2	3	

Reviewed By:	
Title of Instructional Materials:	

Investigate chance processes and develop, use, and evaluate probability models.	Summary and documentation met. Cite examples from the	on of how the materials.	e domain, clu	ister, and standa	ra are
7.SP.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event,	Important Mathematical Ideas	1	2	3	4
a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	Skills and Procedures	1	2	3	-) 4
	Mathematical Relationships	1	2	3	4
and a regular paga(a) reviewed	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cludeveloped in the instruction	uster, and st onal materia	andard that a Is (if any):	re missing or no	ot well
	Overall Rating	1	2	/ 3	

Reviewed By:	
Title of Instructional Materials:	

Investigate chance processes and develop, use, and evaluate probability models.	Summary and documentation met. Cite examples from the	on of how e materials	the domain, cli	uster, and standa	ard are
7.SP.6 Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative	Important Mathematical Ideas	(2	1 3	
requency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.	Skills and Procedures	1	2	3	
	Mathematical Relationships	1	2	3)	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E	vidence			
WDYENT	Portions of the domain, cludeveloped in the instruction	ister, and s	standard that a als (if any):	re missing or no	ot well
	Overall Rating	(

Reviewed By:	
Title of Instructional Materials:	

Investigate chance processes and develop, use, and evaluate probability models.	Summary and documentation met. Cite examples from the	on of how materia	the domain, c	luster, and standa	ird are
 7.SP.7a 7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. 	Important Mathematical Ideas	1	2	3	4
a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.	Skills and Procedures	1	2	3	4
will be selected.	Mathematical Relationships	1	2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E	uster, and	d standard that rials (if any):	are missing or no	ot well
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Title of Instructional Materials:	

nvestigate chance processes and develop, use, and evaluate probability models.	Summary and documentation met. Cite examples from the	on of how the comments.	iomain, ciu	Ster, and Standa	
 7.SP.7b Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. 	Important Mathematical Ideas	1	2	3	4
 b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies? 	Skills and Procedures	1	2	1 3	4
	Mathematical Relationships Summary / Justification / E	1 Evidence	2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cludeveloped in the instruction	uster, and star onal materials	ndard that a (if any):	re missing or no	ot well
	Overall Rating	1	2	1 3	4

Reviewed By:	
Title of Instructional Materials:	

Investigate chance processes and develop, use, and evaluate probability models.	Summary and documentation of how the domain, cluster, and state. Cite examples from the materials.						
7.SP.8a8. Find probabilities of compound events using organized lists, tables, tree	Important Mathematical Ideas	(3	4		
diagrams, and simulation. a. Understand that, just as with simple events, the probability of a			Sand State of State o				
compound event is the fraction of outcomes in the sample space for which the compound event occurs.	Skills and Procedures	← 1	2	3	4		
	Mathematical Relationships	← 1		3	4		
	Summary / Justification / E	vidence					
Indicate the chapter(s), section(s), and/or page(s) reviewed.							
WDYELLY	Portions of the domain, cludeveloped in the instruction	uster, and onal mate	I standard that are i rials (if any):	missing or r	not well		
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52 CONS	Overall Rating	1	1 2	3	4		

Reviewed By:	
Title of Instructional Materials:	

Investigate chance processes and develop, use, and evaluate probability models.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
7.SP.8b8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	Important Mathematical Ideas 1 2 3 4
b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
ndicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By:	
Title of Instructional Materials:	

Investigate chance processes and develop, use, and evaluate probability models.	Summary and documentation of how the domain, cluster, and s met. Cite examples from the materials.							
7.SP.8c8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	Important Mathematical Ideas	3 (1)	2	3	4			
c. Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?	Skills and Procedures	1	2	3				
	Mathematical Relationships	1	2	3	4			
	Summary / Justification /	Evidence						
Indicate the chapter(s), section(s), and/or page(s) reviewed.								
WDYE: 1-4	Portions of the domain, of developed in the instruct	luster, and sta ional materials	indard that are s (if any):	missing or n	ot well			
	Overall Rating	/ (2	3	4			

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Connected Mathematics 7th Grade	1

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	Mathematical Practices						Missing	, ,		
		Chapter/Secti on/Page				Summary/ Justification/Evi		Overall		
	1. Make sense of problems and persevere in solving them.	Yes, as explain	ed in Review	vers' Guide	and on CD-I	Promised but	Practice	Rating 3		
	2. Reason abstractly and quantitatively.	Yes, as explain	ed in Review	vers' Guide	and on CD-I	not enough time to prove		3		
	3. Construct viable arguments and critique the reasoning of others.	Yes, as explain	ed in Review	vers' Guide	and on CD-I	it.Many Rexamples		3		
	4. Model with mathematics.	Yes, as explain	ed in Review	were given in the Reviewers		3				
	5. Use appropriate tools strategically.	Yes, as explain	ed in Review	RC Guide and		3				
	6. Attend to precision.	Yes, as explain	ed in Review	ers' Guide	and on CD-I	with more ctime, these		3		
	7. Look for and make use of structure.	Yes, as explained in Reviewers' Guide and on Cl				could be verified. They		3		
	8. Look for and express regularity in repeated reasoning.	Yes, as explain	ed in Review	ers' Guide	and on CD-I	did not stand		3		
	Analyze proportional relationships and use them to solve real-world and mathematical problems.	Chapter/Secti on/Page	Important Math Ideas			Summary/ Justification/Evi dence	Missing portions of Standards			
7.RP1	Compute unit rates associated with ratios of fractions, including rations of lengths, areas and other quantities measured in like or different units. For example, If a person walks $1/2$ mile in each $1/4$, complete the unit rate as the complex fraction $1/2/1/4$ miles per hour, equivalently 2 miles per hour.			Science lagain in concepts Students explore twith the	Foundation 2000. "Imp s are embers develop u the probler class. " No g of CCSS w	g project funded by National tion between 1991-1997 and Important mathematical mbedded in engaging problems. Op understanding and skill as the blems, individually, in a group, or Not the typical text. Individual SS was not possible in the short				
.RP.2	Recognize and represent proportional relationships between quantities.									
.RP.2a	Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the									

7.RP.2b	Identify the constant or proportionality (unit rate) in tables, graphs,			:				
	equations, diagrams, and verbal descriptions of proportional			· :				
	relationships			ALL CCSS	were suppor	ted.		
7.RP.2c	Represent proportional relationships by equations. For example, if total							
	cost t is proportional to the number n of items purchased at a constant						1	
	price p, the relationship between the total cost and the number of items						: 	
	can be expressed as t = pn.			:				
7.RP.2d	Explain what a point (x, y) on a graph of a proportional relationship		× 1000 × 1000				:	
	means in terms of the situation, with special attention to the points (0							
	,0) and $(1, r)$ where r is the unit rate.							
7.RP.3	Use proportional relationships to solve multistep and percent problems.				:			···
	Examples: simple interest, tax, markdowns, quantities and				1			
***************************************	commissions, fees, percent increases and decrease, percent error.							
	THE NUMBER SYSTEM - 7.NS							
	THE NOWDER STATEM 73NO							
7.NS	Apply and extend previous understandings of operations with							
	fractions to add, subtract, multiply, and divide rational numbers.							
	, , , , , , , , , , , , , , , , , , , ,							
7.NS.1.a	Apply and extend previous understandings of addition and subtractions							
	to add and subtract rational numbers; represent addition and						:	
	subtraction on a horizontal or vertical number line diagram. A.							
	Describe situations in which opposite quantities combine to make 0. For							
	example, a hydrogen atom has 0 charge because its two constituents							
	are oppositely charged.							
7.NS.1b	Apply and extend previous understandings of addition and subtractions				no la comerca de la composição de como a consequencia de como			CONTROL OF LEGISLATION OF THE PROPERTY OF THE
	to add and subtract rational numbers; represent addition and							
	subtraction on a horizontal or vertical number line diagram. B.							
	Understand $p+q$ as the number located a distance $ q $ from p , in the			:				
	positive or negative direction depending on wither q is positive or			i				
	negative. Show that a number and its opposite have a sum of 0 (are							
	additive inverses). Interpret sums of rotational numbers by describing	:						
	real-world contexts.	:						
7.NS.1c	Apply and extend previous understandings of addition and subtractions	:						
	to add and subtract rational numbers; represent addition and							
	subtraction on a horizontal or vertical number line diagram.							
	C. Understand subtraction of rational numbers as adding the additive							
	inverse, $p - q = p + (-q)$. Show that the distance between two rational					•		
1	numbers on the number line is the absolute value of their difference,			:				
	and apply this principle in real-world contexts.			:				

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7.NS.1d	Apply and extend previous understandings of addition and subtractions to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. D. Apply properties of operations as strategies to add and subtract rational numbers.					
7.NS.2a	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. A. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to produces such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.					
7.NS.2b	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. B. Understand that integers can be divided. Provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)lq = pl(-q)$. Interpret quotients of rational numbers by describing real-world contexts.					
7.NS.2c	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. C. Apply properties of operations as strategies to multiply and divide rational numbers.					
7.NS.2d	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. D. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually			Value 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
7.NS.3	Solve real-world and mathematical problems involving the four operations with rational numbers. (Computations with rational numbers extend the rules for manipulating fractions to complex fractions).					
7.EE	EXPRESSIONS AND EQUATIONS - 7.EE					
, , , , , , , , , , , , , , , , , , , ,	Use properties of operations to generate equivalent expressions.	ya a karantara ya mata ya mata kata pamatiki a kata kata da kata kata kata kata kata		 		
7.EE.1	Apply properties of operations as strategies to add and subtract, factor, and expand linear expressions with rational coefficients.		:			

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7.EE.2	Understand that rewriting an expression in different forms in a problem							
	context can shed light on the problem and how the quantities in it are		:					
	related. For example, a + 0.05a = 1.05a means that "increase by 5%" is		!					
	the same as "multiply by 1.05."							
	Solve real-life and mathematical problems using numerical and			•				
	algebraic expressions and equations.							
7.EE.3	Solve multi-step real-life and mathematical problems posed with							
	positive and negative rational numbers in any form (whole numbers,							
	fractions, and decimals), using tools strategically. Apply properties of							
	operations to calculate with numbers in any form; convert between							
	forms as appropriate; and assess the reasonableness of answers using							
	mental computation and estimation strategies. For example: If a							
	woman making \$25 an hour gets a 10% raise, she will make an			:				
	additional 1/10 of her salary an hour, or \$2.50, for a new salary of							
	\$27.50. If you want to place a towel bar 9 % inches long in the center of				:			
	a door that is 27 ½ inches wide, you will need to place the bar about 9							
	inches from each edge; this estimate can be used as a check on the			:				
	exact computation.			:				
7.EE.4a	Use variables to represent quantities in a real-world or mathematical				: ************************************		<u> </u>	
7.EL10	problem and construction simple equations and inequalities to solve							
	problems by reasoning about the quantities.							
	A. Solve word problems leading to equations of the form $px + q = r$ and							
	p(x + q) = r, where p , q , and r are specific rational numbers. Solve							
	equations of these forms fluently. Compare an algebraic solution to an							
	arithmetic solution, identifying the sequence of the operations used in				•			
	each approach. For example, the perimeter of a rectangle is 54 cm. its				:			
	length is 6 cm. What is its width?				:			
	Use variables to represent quantities in a real-world or mathematical					:		:
7.EE.4b								
	problem and construction simple equations and inequalities to solve			:			1	
	problems by reasoning about the quantities. B. Solve word problems leading to inequalities of the form px + q > r or px				:			
	+ q < r, where p, q, and r are specific rational numbers. Graph the	:	:					
	solution set of the inequality and interpret it in the context of the							
	problem. For example: As a salesperson, you are paid \$50 per week plus					:		
	\$3 per sale. This week you want your pay to be at least \$100. Write in			:				
	inequality for the number of sales you need to make, and describe the							
	solutions.							
	Solutions.		:					
					(952.45) (94.46) (95.56) (95.56)			d sagragamento e co
	GEOMETRY - 7.G							

	Draw, construct, ad describe geometrical figures and describe the						
	relationships between them.						
7.G.1	Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.				e i describe de compressor de la		
7.G.2	Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.						
7.G.3	Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.						
7.G.4	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.		:				
7.G.5	Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and simple equations for an unknown angle in a figure.						
7.G.6	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.						
7.SP	STATISTICS AND PROBABILITY - 7.SP	:	i i	;		!	:
	Use random sampling to draw inferences about population.						
7.SP.1	Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.						

7.SP.2	Use date from random sample to draw inferences about a population					
7.01.12	with an unknown characteristic of interest. Generate multiple samples					
	(or simulated samples) of the same size to gauge the variation in					
	estimates or predictions. For example, estimate the mean word length					
	in a book by randomly sampling words from the book; predict the					
	winner of a school election based on randomly sampled survey data.					
.,,,	Draw informal comparative inferences about two populations.			:		
7.SP.3	Informally assess the degree of visual overlap of two numerical data	i i				
	distributions with similar variabilities, measuring the difference	:				
	between the centers by expressing it as a multiple of a multiple of a					
	measure of variability. For example, the mean height of players on the					
	basketball team is 10 cm greater than the mean height of players on					
	the soccer team, about twice the variability (mean absolute deviation)					
	on either team; on a dot plot, the separation between the two		:			
	distributions of heights is noticeable.					
7.SP.4	Use measures of center and measures of variability for numerical data					
	from random samples to draw informal comparative inferences about				\$ 5 7	
	two populations. For example, decide whether the words in a chapter		:			
	of a seventh-grade science book are generally longer than the words in					
	a chapter of a fourth-grade science book.					
	Investigate chance processes and develop, use and evaluate probability models.	-	•	•	ı	'
7.SP.5	Understand that the probability of a chance event is a number between			:	:	
	0 and 1 that expresses the likelihood of the event occurring. Larger			:		
	numbers indicate grater likelihood. A probability near 0 indicates an					
	unlikely event. A probability around 1/2 indicates an event that in					
	neither unlikely or likely and a probability near 1 indicates a likely event.					
7.SP.6	Approximate the probability of a chance event by collecting data on the				·	
	chance process that produces it and observing its long-run relative					
	frequency, and predict the approximate relative frequency given the					:
	probability, For example. When a rolling a number cube 600 time,					:
	predict that a 3 or 6 would be rolled roughly 200 times, but probably					
	not exactly 200 times.					

7.SP.7a	Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. A. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.		The second control of	
7.SP.7b	Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. B. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land on heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?		,	
7.SP.8a	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. A. Understand that, just as with sample events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.			
7.SP.8b	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. B. Represent sample spaces for compound events using mentors' such as organized lists, table, and tree diagrams', For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.			
7.SP.8c	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. C. Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the questions: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?			